

PATENT ABSTRACTS OF JAPAN

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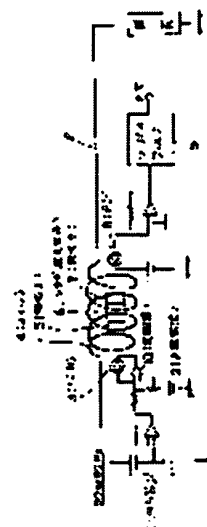
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(54) POWER SENSOR

(57)Abstract:

PURPOSE: To achieve a smaller size and a lighter weight of the apparatus, by a method wherein a modulation is applied to a light emitting element by a voltage at a measuring point and light thus obtained is passed through a Faraday effect element subjected to a modulation by a current at the measuring point to form a power sensor requiring no current transformer.

CONSTITUTION: A light emitting element LED 3 is driven with a DC power source 2. As the element is controlled with a modulator 10 with the application of a voltage of a capacitor voltage divider 1 thereto, emission of the LED 3 is turned to a light modulated by a voltage signal. The light modulated generates a Faraday effect in a coil 4 by a magnetic field with a current flowing to the coil 4 through a Faraday effect element 6 placed between a polarizer 5 and an analyzer 7 to cause a modulation of light. Light emitted from the analyzer 7 is received with a photo diode PD8 to be converted into electricity which is passed through a low pass filter 9. Thus, with the removal of an AC component, a DC component is determined to be measured with a voltmeter.



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